UNIVERSITY OF QUEENSLAND

Prentice Computer Centre

NEWSLETTER

authorization: Director of the Centre

1. SYSTEM TUNING

The demand for the computing resources provided by the
Prentice Computer Centre frequently exceeds the capacity
of the presently installed equipment to the detriment of
interactive response time, batch turn-around and overall
system reliability. However, not all components of the
system are necessarily saturated.

The DEC System 1055 operated by the Computer Centre is a
dual processor system which means that the system could
theoretically obtain twice the processing throughput
of an ordinary (1050) PDP-10 installation. Recently
gathered statistics on the operation of the monitor
indicate that although there is a high demand for processing
the second CPU remains idle in excess of 50% of the time.
This is the case because although the largest proportion of
jobs are waiting to run (in the RN state) at all times, the
swapping system cannot provide in core jobs to run fast
enough to fully utilise the CPU's.

It is likely that this situation can be improved upon by the
adjustment of a number of parameters within the monitor.
One of the parameters with which the software engineering
staff of the Centre will be experimenting in the near
future is the Default Number of Buffers.

This is the number of buffers which the monitor places in a
user's buffer ring when the user does not specify the number
of buffers or allows the monitor to create a buffer ring for
buffered mode I/O (modes 0-14).

It is hoped that modification of this parameter will have no detrimental side-effects on user's programs as most programs on the PDP-10 will have been written to be independent of this number. However, it is impossible to be certain that there will be no unpredictable consequences, therefore, users are cautioned to watch for problems which may derive from this or any other aspect of the system tuning and report them to the Centre.

2.   SPSS VERSION 6.01.1

As from 1 May 1976 the new version of this package will be moved from NEW: onto STA: . At the same time the version 5.02.2 that it replaces will be moved from STA: to OLD: .

As mentioned in a previous newsletter (N-198) the format of some of the control cards has changed and existing users should consult appendix B of the new manual which details all these changes. Also the default workspace allocation of 2K means SPSS loads into slightly more than the 32K available before 6.00 pm. Thus if it is desired to use the package during the day a /SPACE:3P switch, which lowers the workspace to 1.5 K, must be used.

It should also be noted that this version requires the user to explicitly set aside space for transformations, data selection cards etc. via the ALLOCATE card, if the default space is insufficient. For further explanation of this point see page 111 of the purple manual. Bear in mind, however, that in this DEC implementation the default value of SPACE is 2K or 8000 bytes and not the 80000 bytes available for the IBM 360-370 implementation.

A file explaining deviations from the manual in this implementation and known bugs in SPSS can be found on HLP: . It should be printed via the command .PRINT HLP:SPSS.HLP .

3. TOPSTEACH LESSONS ON THE DEC-10

A set of programs designed as an introductory computer aided course on the use of the DEC-10 system is now available.

Each of the programs is a self contained lesson on a particular aspect of the use of this computer system. They all operate interactively following short passages of explanatory material with a series of questions designed to test the users understanding of this material. If a question is wrongly answered the program pinpoints the source of error and if necessary gives a hint to aid the user in arriving at the correct response. At any time during the lesson the user may elect to go back to a previous question, skip ahead or terminate the lesson entirely.

At present the programs available fall into two groups - general aspects of the use of the system and use of the editor program. The programs in each group are:-

    (i)   General

              TOPS01   Talking to the DEC-10
              TOPS02   Running ready made programs
              TOPS03   PPN's and logging in
              TOPS04   Disk files
              TOPS10   Monitor commands and file handling
              TOPS12   Logging out

    (ii)   Editor

        EDIT01, EDIT02, EDIT03, EDIT04 four separate lessons on the various editor commands.

        All programs reside on TUT: and can be run by the command   .RUN TUT:?????
where ????? is the required lesson name.

        Also on TUT: are two files TOPS.MAN and EDIT.MAN which list all the material in the lessons.

Each program also generates a report on the user's
performance in the lesson. This will be a file of the
type *.LPT which can be deleted or printed as desired
at the conclusion of the lesson.

4.   EASY GRAPH PLOTTING PACKAGE

ATOPLT a Fortran package for plotting graphs with one
subroutine call has been incorporated into PLO:CALF10.REL
the Fortran-10 plotting library. Documentation including
examples of the use of ATOPLT should be available shortly,
but until then full details of ATOPLT's capabilities can
be found in DOC:ATOPLT.MEM .

5.   SYMAP VERSION 20

Version 5.20 of SYMAP is available on the PLO: directory.
It is upwards compatible with version 5.19 except for
F-MAP elective 21 handling. The output file generated by
elective 21 is MAPxxx.DAT where xxx is a left justified
integer eg. MAP∅.DAT & MAP1∅∅.DAT .

The number should be specified in columns 21-30 with a
trailing decimal point and should be positive <= 999.
This change makes it possible to generate many stored maps
in one run.

Other enhancements will be detailed in the new SYMAP manual,
currently on order from Harvard. Brief detaiLs of the
enhancement may be obtained by printing DOC:SYMAP.DOC .

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